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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,012	06/13/2005	Masahiro Morooka	S1459.70047US00	6931

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EXAMINER	
BALL, JOHN C	
ART UNIT	PAPER NUMBER
1795	
MAIL DATE	DELIVERY MODE
04/14/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/511,012	MOROOKA ET AL.	
	Examiner	Art Unit	
	J. CHRISTOPHER BALL	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Summary

1. This Office Action based on the Amendment after Final Action with Request for Continued Examination filed with the Office on January 26, 2009, regarding the MOROOKA et al. application.

2. Claims 1-14 are currently pending and have been fully considered.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 26, 2009, has been entered.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, and 4-14 are rejected under 35 U.S.C. 102(b) as being anticipated by FURUMIYA et al., an English translation of a published Japanese Patent Application (JP 2002-289271, A), filed with the Office on July 2, 2007, in an Informational Disclosure Statement. The Examiner notes that the publication date of this reference is October 4, 2002; and the rejection based on this reference would be overcome by perfection of the instant application's foreign priority claim with the submission of a certified English translation of the foreign priority application JP 2002-109427 (35 USC 119 (b)(3))

Regarding claim 1, FURUMIYA discloses a pigment sensitizes solar cell with electrolyte composition, wherein is taught a method for forming an electrolyte comprising:

forming a matrix polymer by polymerization (paragraph [0067]) of a first compound having at least two isocyanate groups (tolylene diisocyanate, paragraph [0065]) and a second compound having at least two nucleophilic groups containing active hydrogen (polytetramethylene glycol, paragraph [0065]), said polymerization begin performed after a precursor for the matrix polymer is brought into contact with a surface on which the electrolyte is to be formed (paragraphs [0066]-[0068]).

Regarding claims 2 and 4, FURUMIYA teaches the electrolyte composition comprises a solvent, which is an ionic liquid, to form a gel electrolyte (propylene carbonate, paragraph [0063]).

Regarding claim 5-7, FURUMIYA teaches the electrolyte composition comprises a redox couple in the form of iodine and an iodine compound (paragraph [0018]).

Regarding claim 8, FURUMIYA teaches a photocell comprising:

a semiconductor layer (13, Drawing 1) composed of semiconductor particles carrying a dye (paragraph [0014]) and an electrolyte layer (14, Drawing 1), the layers being provided between a counter electrode (15, Drawing 1) and an electrode (12, Drawing 1) formed on a surface of a substrate (11, Drawing 1);

wherein the electrolyte layer has a redox couple, an electrolyte composition, and a matrix polymer (paragraph [0014]); and

wherein the matrix polymer is a polymer formed by polymerization (paragraph [0067]) of a first compound having at least two isocyanate groups (tolylene diisocyanate, paragraph [0065]) and a second compound having at least two nucleophilic groups containing active hydrogen (polytetramethylene glycol, paragraph [0065]).

Regarding claim 9, FURUMIYA teaches the substrate is a transparent substrate (paragraph [0007]).

Regarding claim 10, FURUMIYA teaches a method of manufacturing a photocell comprising:

injecting a mixed solution between a counter electrode and an electrode formed on the surface of a substrate (paragraph [0007]), the mixed solution containing a first compound having at least two isocyanate groups (tolylene diisocyanate, paragraph [0065]) and a second compound having at least two nucleophilic groups containing active hydrogen (polytetramethylene glycol, paragraph [0065]), and an electrolyte composition having a redox couple (paragraph [0009]); and

polymerizing the first and second compounds after the mixed solution is brought into contact with the electrode formed on the surface of the substrate (paragraph [0009]).

Regarding claim 11, FURUMIYA teaches forming a semiconducting layer (13, Drawing 1), composed of semiconductor particles carrying a dye (paragraph [0007]), between the electrode (12, Drawing 1) and the counter electrode (15, Drawing 1).

Regarding claim 12, FURUMIYA teaches conditions for reaction of tolylene diisocyanate with polytetramethylene glycol (paragraph [0065]), which would inherently result in polymerization by a Michael addition reaction.

Regarding claim 13, FURUMIYA teaches the electrolyte composition comprises a redox couple in the form of iodine and an iodine compound (paragraph [0018]).

Regarding claim 14, FURUMIYA teaches a method of manufacturing a photocell comprising:

forming a semiconducting layer (13, Drawing 1), composed of semiconductor particles carrying a dye (paragraph [0007]), between the electrode (12, Drawing 1) and the counter electrode (15, Drawing 1);

applying a first compound having at least two isocyanate groups (tolylene diisocyanate, paragraph [0065]) and a second compound having at least two nucleophilic groups containing active hydrogen (polytetramethylene glycol, paragraph [0065]); and

polymerizing the first and second compounds (paragraph [0009]).

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by YONEHARA et al., an English translation of a Japanese Patent Application

Publication (2000-306605, A), submitted to the Office on an Informational Disclosure Statement.

Regarding claim 1, YONEHARA discloses a solid electrolyte for use in electrical system, wherein is taught the method of forming an electrolyte comprising:

forming a matrix polymer by polymerizing a first compound having at least two isocyanate groups (compounds containing diisocyanate groups, paragraphs [0058] and [0070]) and a second compound having at least two nucleophilic groups containing active hydrogen (material containing alkylene glycol derivatives; claim 2),

said polymerization being preformed after a precursor for the matrix polymer is brought into contact with a surface on which the electrolyte is to be formed (paragraph [0109]).

Regarding claims 2 and 4, YONEHARA teaches the electrolyte composition comprises a solvent, including an ionic liquid, to form a gel electrolyte (paragraph [0100]).

Regarding claim 3, YONEHARA teaches the electrolyte composition comprises no solvent to form a solid electrolyte (paragraph [0102]).

Consideration of International Search Report for Application PCT/JP03/04562

7. The ISR for the International application of which the instant application is a National Stage application cited the following prior art references as "X" and/or "Y" references:

JP H08-088030, A

JP 2001-110462, A

JP 2000-306605, A

JP 2002-042879, A

JP 2001-313074, A

The Examiner considered these references, and found that JP H08-088030, A and JP 2002-042879, A do not teach or suggest polymerization being performed on the surface which the electrolyte is to be formed; and JP 2001-110462, A and JP 2001-313074, A do not teach or suggest use of a compound with at least two isocyanate groups. JP 2000-306605, A was used in a 35 USC 102(b) rejection above.

Consideration Supplementary European Search Report for EP 03717557

8. The Supplementary ESR for the European National Stage version of the instant application cited the following prior art references as "X" and/or "Y" references:

WO 02/078115, A

WO 97/08719, A

US 4,585,581

EP 1093131, A

The Examiner considered these references, and utilized an English translation of the priority application to WO 02/078115 (JP 2002-289271, A) in a 35 USC 102(b) rejection above. Additionally, WO 97/08719, US 4,585,581, and EP 1093131 do not teach or suggest use of a compound with at least two isocyanate groups.

Consideration Japanese Office Action on Application JP 2002-109427

9. An Office Action from the Japanese Patent Office rejecting the foreign priority application associated with the instant application was drafted on April 24, 2007, and cited the following prior art references in rejection of the presented claims:

JP H08-088030, A

JP 2000-306605, A

JP 2002-042879, A

JP 2001-313074, A

JP 2001-273938, A

JP 2001-160427, A

JP 2002-289271, A

The Examiner considered these references: the first four were also listed on the ISR for PCT/JP03/04562 and have been mentioned above; JP 2001-273938, A and JP 2001-160427, A do not teach or suggest use of a compound with at least two isocyanate groups, and JP 2002-289271, A was used in a 35 USC 102(b) rejection above.

Response to Arguments

10. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. CHRISTOPHER BALL whose telephone number is (571)270-5119. The examiner can normally be reached on Monday through Thursday, 8:00 am to 5:00 pm (EDT).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCB
AU 1795
04/11/2009

/Alex Noguerola/

Primary Examiner, Art Unit 1795

April 13, 2009